

UNITED STATES PATENT OFFICE.

JACOB KAUFMANN, OF WILMERSDORF, NEAR BERLIN, GERMANY.

PROCESS OF INLAYING METAL IN MASSES SUCH AS CELLULOID, EBONITE, AND THE LIKE.

1,024,203.

Specification of Letters Patent.

Patented Apr. 23, 1912.

No Drawing.

Application filed May 2, 1911. Serial No. 624,657.

To all whom it may concern:

Be it known that I, JACOB KAUFMANN, merchant, a subject of the German Emperor, residing at 172 Kaiserallee, Wilmersdorf, near Berlin, Germany, have invented certain new and useful Improvements in Processes of Inlaying Metal in Masses Such as Celluloid, Ebonite, and the Like, of which the following is a specification.

10 The subject-matter of my invention is a process of inlaying metal in masses such as celluloid, ebonite and the like.

Metal inlays are inserted, as is known, in masses such as celluloid, ebonite, wood, 15 pasteboard or the like, by the pieces of metal in question being placed on the softened mass and pressed under a press until they are located in one plane with the mass. Heretofore, these metal inlays were sawn, 20 stamped or, more rarely, corroded out of a sheet of metal, but for the sake of cheapness only simple, generally connected, ornamental shapes came into consideration, freer artistic forms being almost entirely avoided.

25 The present process, on the contrary, enables any desired ornamentation, whether rich or simple, connected or comprising any desired number of separate individual parts, to be made in a very simple and cheap manner. 30 Instead of working up the sheet metal by itself and placing the ornamental pieces obtained therefrom on the mass or foundation only at the moment of their employment, I firmly cement or mount the uncut 35 sheets of metal on the foundation or mass, and only subsequently separate them by corrosion or graving. It is obvious that where the sheet is attached with its entire face to the mass, each individual part which remains after the corrosive action is completed must remain adhering to the mass and it is not necessary, as heretofore, in the case of rich, disconnected designs to assemble the individual constituent parts of the 45 ornamentation with considerable trouble in the proper arrangement on the mass.

My process may be carried into practice as follows:—The drawing of the ornamentation in question is painted on a sheet of 50 metal with the aid of an acid-proof paint or the like, preferably japan-black, or, in the event of the same pattern being fre-

quently repeated, by means of a printing process. After the paint has dried, the entire underside of the sheet of metal is 55 attached to its foundation by means of a suitable adhesive, placed together with the foundation into an acid bath and subjected to a corrosive process. As the plastic masses which come into question are not attacked by the liquid corrosive, the corrosion 60 may be continued until all the unprotected parts of the metal sheet have been dissolved down to their foundation and only the ornament remains which can then at once be 65 pressed into the soft mass. A process is known according to which patterns in metal are made on the surface of celluloid sheets by imprinting metallic powders or thin foil thereon by means of dies in the 70 manner of bookbinders' impressions. This known process, however, has nothing in common with my process inasmuch as it is there a matter of exceedingly transitory ornamentations which adhere only to the surface 75 of the sheets of celluloid and can be rubbed off with ease without impairing the foundation, whereas in my process solid metal inlays are used which not only exceedingly resist mechanical action, but can 80 be ground and polished and also can only be destroyed with the foundation itself.

I claim:—

A process of inlaying metal in plastic masses such as celluloid, ebonite, wood, 85 pasteboard and the like, which consists in providing the top side of a solid sheet of metal with a drawing in acid-proof paint, in mounting the sheet of metal with its bottom side on the plastic mass, in subsequently 90 placing the sheet of metal together with the mass in a corrosive bath and leaving the same therein until all the surface of the sheet unprotected by the paint has been dissolved, in removing the mass with the adhering 95 metal from the bath, and in then pressing the metal left adhering to the mass into the latter.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB KAUFMANN.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."